

### **REMARKS**

Claim 2-12, 25-28, 30, 32 and 36-43 are pending.

Support for the amendments to claims 42 and 43 can be found in the specification at page 19, line 10 to page 20, line 1, which discloses that there is no restriction on the origin of the thermostable DNA polymerase having 3'-5' exonuclease activity with a replacement of histidine by another amino acid in the DIETLYH or DIETFYH sequence of the exonuclease I region, wherein the thermostable DNA polymerases of *Pyrococcus furiosus*, *Pyrococcus kodakaraensis* KOD1 and *Thermococcus litoralis* are disclosed as examples of the thermostable DNA polymerase for the histidine replacement. The amendments to claims 42 and 43 would not narrow the scope of the amended claim recitations because, with or without the current amendments, the modification is the replacement of histidine in the DIETLYH or DIETFYH sequence of the exonuclease I region, and because "thermostable DNA polymerase having a 3'-5' exonuclease activity and the amino acid sequence of a thermostable DNA polymerase having a 3'-5' exonuclease activity of *Pyrococcus furiosus*, *Pyrococcus kodakaraensis* KOD1 and *Thermococcus litoralis* with a single modification" in the currently amended claim 42 is not narrower than the recitation in claim 42 before the current amendment that "the origin of the thermostable DNA polymerase being modified is *Pyrococcus furiosus*, *Pyrococcus kodakaraensis* KOD1 or *Thermococcus litoralis*."

The amendments to claims 2-12, 28, 32 and 36-41 are editorial and would not narrow the scope of the amended claim recitations.

### **Applicants' Statement on Substance of Examiner Interviews**

The undersigned would like to thank Examiner Hutson for courtesy extended in two telephone interviews conducted with Examiner Hutson on December 28, 2006 and a telephone interview with Examiner Hutson on April 17, 2007. In the telephone interviews of December 28, 2006, the undersigned proposed amendments to claims 42 and 43 to deal with the lack of written description rejections of record and the concerns of Examiner Hutson expressed in the Advisory Action dated December 15, 2006 that the claims failed to exclude the "many additional variants and mutants of those polymerases which originate in *Pyrococcus furiosus*, *Pyrococcus kodakaraensis* KOD1 and *Thermococcus litoralis*" with the "many additional variants and

mutants” referring to DNA polymerases having amino acid modification(s) in addition to the replacement of histidine in the DIETLYH or DIETFYH sequence within the exonuclease I region. In the interview of April 17, 2007, the undersigned discussed with Examiner Hutson regarding the Advisory Action of April 10, 2007. Examiner Hutson indicated that the amendment to claim 42 presented above appeared to address his concern raised in the Advisory Action of April 10, 2007.

Claim Rejections -- 35 U.S.C. 112, First Paragraph

Applicants respectfully traverse the December 2006 Advisory Action’s rejection of claims 2-12, 25-28, 30, 32 and 36-43 under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification as filed. However, to advance prosecution, claims 42 and 43 have been amended to more specifically recite a thermostable DNA polymerase having a 3’-5’ exonuclease activity and the amino acid sequence of a thermostable DNA polymerase of *Pyrococcus furiosus*, *Pyrococcus kodakaraensis* KOD1 or *Thermococcus litoralis* with a modification, wherein the modification is a replacement of histidine (H) by another amino acid in the DIETLYH or DIETFYH sequence of the exonuclease I region. Since the thermostable DNA polymerases according to claims 2-12, 25-28, 30, 32 and 36-43 are supported by the written description in the application as filed, withdrawal of the rejection under 35 U.S.C. 112, first paragraph, is requested.

Conclusion

In light of the above reasoning, applicants submit that the application is in a condition for allowance. A Notice of Allowance is believed in order.

In the event that the filing of this paper is deemed not timely, applicants petition for an appropriate extension of time. The petition fee, and any other fees that may be required in relation to the filing of this paper, can be charged to Deposit Account No. 11-0600, referencing Docket No. 10089/14.

Respectfully Submitted,  
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